“Begin at the Beginning”: Initial Conditions Matter for the Size Distribution of Firms

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Abstract

This paper quantifies the effects of firm size at entry on the distribution of firm sizes over time. The distribution of firm sizes is extremely skewed: A small number of firms account for a large share of output. This has implications for our understanding of a range of macroeconomic and international-trade issues, such as the magnitude of business cycles and the patterns of export-market participation. Much of the literature on firm-size distributions has focused on the dynamics of individual firm sizes over time, deriving ergodic size distributions from models of firm growth and exit.

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Using *Compustat* data, we find that firm sizes are very persistent over time. The correlation of a firm's current size with its size 25 years ago is 0.71, which means that size depends more on initial conditions than on subsequent firm dynamics over 25 years. This finding indicates that firms fail to converge to an ergodic size distribution even over quite long horizons.

We explore this fact using the *Compustat* data, and then draw on U.S. census data to quantify the importance of firm size at entry relative to the dynamics of firm size over time for the cross-sectional distribution of firm sizes. We conclude with a simple theoretical model of the optimal firm size on entry.

Keywords: Size distribution of firms; Firm entry and exit.

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